TM13

USER MANUAL

20590_20131113 TM13 ™
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SAFETY WARNINGS

- The wiring of your electrical installation is live (230 V) and extremely dangerous. Never connect the module when plugged into the mains. Always turn off the main switch before starting the installation.
- This product is for professional use and should be installed by a certified installer."
- To prevent short circuits, this product should only be used inside and only in dry spaces. Do not expose the components to rain or moisture. Do not use the product close to a bath, swimming pool etc.
- Do not expose the components of your systems to extremely high temperatures or bright light sources.
- In case of improper usage or if you have altered and repaired the product yourself, all guarantees expire. Marmitek does not accept responsibility in the case of improper usage of the product or when the product is used for purposes other than specified. Marmitek does not accept responsibility for additional damage other than covered by the legal product responsibility.
- This product is not a toy. Keep out of reach of children.
- Do not open the product: the device may contain live parts. The product should only be repaired or serviced by a qualified expert.
- Automatic switching devices provide comfort, but can also be dangerous. They can surprise people or can ignite clothing hanging over an electric heat source. Please be careful and take appropriate measures to avoid accidents.

HOW DOES MARMITEK X-10 WORK?

Marmitek X-10 components use the existing mains wiring to communicate (using Marmitek X-10 signals). You can build a complete system using the three different kind of components of the Marmitek X-10 System:
1. Modules: These components will receive Marmitek X-10 signals and will switch or dim the attached lamp or appliance. Examples of these modules are lamp modules and appliance modules. These are available as build-in, micro, DIN rail and plug-in modules.
2. Controllers: These components will transmit Marmitek X-10 signals and thus will control the Modules.
3. Transmitters:Wireless components like remotes. The signals of these components will be received by a controller with transceiver functionality (IRRF 7243, TM13, CM15Pro…..). The Transceiver will translate the signals into Marmitek X-10 signals on the power line.

ADRESSES

Up to a maximum of 256 different addresses can be preset. These are subdivided into a so-called HouseCode (A to P incl.) and a UnitCode (1 to 16 incl.). The HouseCode can also be set on the controllers, so that the controllers and modules become part of the same system. The address can be set either using code dials or by pressing buttons, depending on the type of module.
The Marmitek X-10 System uses standard commands, which control all units with the same HouseCode at the same time (e.g. all lights on, all units off, etc.).

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SIGNAL RANGE

Range of Marmitek X-10 signals over the Power Line and how to increase the range.

The Marmitek X-10 System is based on power line communication. The range of the Marmitek X-10 signals very much depends on the local circumstances. On average the range is a cable length of 80 meters.

If you have difficulties with the range of your Marmitek X-10 signals, please pay attention to the following facts:

1. When more than one phase is used for your electrical system, it is necessary to couple these phases for the Marmitek X-10 signals. For coupling you can use FD10 Phase Couplers/Filters. You only need to install a Phase Coupler/Filter when your wall outlets and light switches are divided over more than one phase (more than one group is no problem). For bigger buildings or longer distances we advice you to use an active repeater instead of passive FD10's.
2. It is possible that Marmitek X-10 signals are attenuated by devices and lights which are connected to the power line. In a normal home situation this effect is negligible (the Marmitek X-10 system is using active gain control to eliminate the effects). However, it is possible that a particular device in your house is attenuating the signals so much that the range of Marmitek X-10 signals is decreased significantly. When you have range problems, it is wise to try to locate the device which is attenuating the signals simply by unplugging devices from the power line, and testing the differences in range for your Marmitek system. When e.g. your conclusion is that e.g. your computer monitor is attenuating the signal, you can use a FM10 Plug-in Filter between the power line and the monitor to eliminate the effects.

Known devices which can cause attenuation are:

PC Monitors

PCs with heavy internal power supplies

Old Televisions
Copiers
Fluorescent Lights
Gas Discharge Lamps (Energy Saving Lamps)

3. Some (old) devices are able to disturb the signal by transmitting noise on the power line. Because the Marmitek X-10 signals are transmitted on 120 kHz, only noise on or near this frequency will have influence on the range. When you use a FM10 Filter to connect this device to the power line, the noise will be filtered.

4. The Marmitek X-10 protocol has several mechanism to avoid modules to be switched on or off by other sources than your Marmitek X-10 Controllers. However, it is possible that the Marmitek X-10 signals are disturbed by e.g. baby phones which are in TALK mode (continuous transmission). When these kind of signals are present on the power line it is possible that the Marmitek X-10 signals will not come through.

5. The mains do not stop at the front door of your home. Everything that is attached to mains nearby your home can have influence on Marmitek X-10 signals (e.g. heavy machinery). If you think that your system is influenced by devices out of your house, it is advisable to install FD10 Phase Coupler/Filter on each phase entering the house. These filters will block signals coming into or going out of your house, but will also match the impedance for the mains. Hereby make your house Marmitek X-10 compatible for these units. The FD10's will not only filter but will also couple the phases (please see 1).

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INTRODUCTION

Congratulations with your purchase of the Marmitek X-10 HOME CONTROL TM13 Transceiver. Among other things, the TM13 Transceiver allows you to use your Marmitek X-10 remote control to operate your X-10 switching and dimming modules, wherever you are in your house.

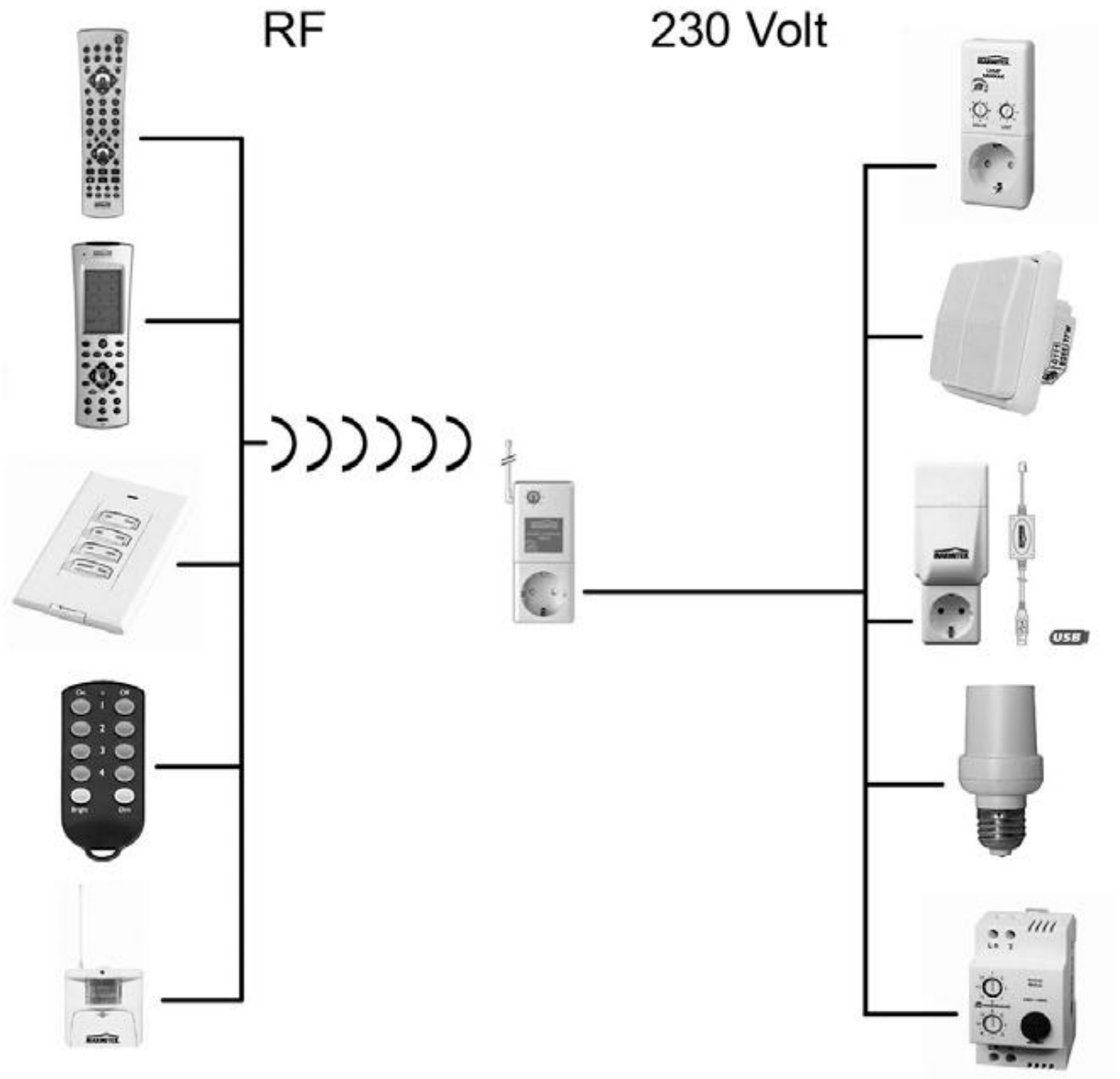
How does it work?

The TM13 is a controller that is activated by transmitters. The controller operates Marmitek X-10 modules via the mains to switch your lighting and appliances on and off. This means that the TM13 forms the heart of your Marmitek X-10 installation.

The TM13 Transceiver operates with the following transmitters:

- Marmitek X-10 remote controls such as the EasyControl8 and the EasyTouch 35.
- The SS13 slimline wireless switch (the ideal solution for situations that require an (additional) switch without having to fit wires. Can be fitted to walls, glass, doors, tables, etc.)
- The KR22 wireless remote control (an attractive extra-slim remote control for operation of Marmitek X-10 Modules from a distance. Can be used as a key ring. Can be used to control three addresses + dimmer function.)

- The MS13 wireless motion sensor with memory (switches lighting and appliances on when someone is present and switches them off again afterwards. Switches on interior and exterior lighting when arriving



home in the dark.)

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FIRST USE OF THE TM13

1. Set the HouseCode (A to P) of the Home Control TM13 Transceiver to the same code as you have set your other modules. The UnitCode cannot be set and will always be ‘1’. If the TM13 is set to HouseCode ‘P’, all commands from remote controls will be converted into an X-10 signal over the mains, regardless of the HouseCode. The HouseCode used will in this case be the same as the HouseCode of the remote control.
2. Point the antenna upwards.
3. Plug the Home Control TM13 into a socket (preferably in a central location of your house).
4. Insert the plug of an appliance or light in the module. This can now be controlled using the ‘1’ button of your remote.

Normally speaking, only one TM13 will be required per installation if wireless controllers are used that are set to the same HouseCode (Does not apply to TM13EFL). The TM13 includes a so-called ‘collision detection’ system. This prevents problems from occurring when several TM13 modules are used and it allows expansion of the RF range by using several TM13 modules that are set to one and the same HouseCode. The module responds to the following Marmitek X-10 commands: ‘ON’, ‘OFF’ and the Marmitek X-10 group command ‘All Units Off’.

FREQENTLY ASKED QUESTIONS

What is the reason for modules to switch on/off spontaneously?

It is possible that a Marmitek X-10 System is installed at one of your neighbours using the same House Code. To solve this problem try to change the House Code of your system, or have FD10 Phase Coupler/Filter installed at your incoming mains.

My modules will not respond to my controller.

Make sure that the House Code on all Modules and Controllers are set to the same House Code (A .. P).

Am I able to increase the range of my remotes by using more Transceivers?

Yes, you can use more than one TM13 Transceiver in your home when the range of your remotes is not sufficient. The TM13 is using so called collision detection to prevent signals to be disturbed when more than one TM13 is transmitting. TM13's will wait for a quite power line before transmitting their data. To prevent your Marmitek X-10 System to become slow or to prevent dimming from becoming less smooth, make sure that the TM13 units are placed as far away from each other as possible.

Do you have other questions that have not been resolved by the above information? Please go to www.marmitek.com

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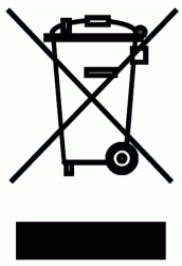
TECHNICAL DATA

Supply voltage:	230 V – 50 Hz
Power consumption:	< 20 mA, capacitive
Switching capacity:	300W/230V for light bulbs and low-voltage halogen lamps with a 500W/230V transformer for inductive / capacitive loads 1200 W/230V for linear loads
Frequency:	433.92 MHz
Transmission signal:	120 kHz ± 2 kHz / 2.5 Vpk-pk
Signal sensitivity:	15 mVpp min, 50 mVpp max at 120 kHz
X-10 Key codes:	All Units Off, On, Off, Status Request
Input impedance:	180 ohms (P–N) at 120 kHz
Ambient temperature:	–10°C to +50°C (operation), –20°C to +70°C (storage)
Dimensions:	52 x 122 x 33 mm (excluding plug)

Specifications may be modified without prior notice.



Environmental Information for Customers in the European Union

European Directive 2002/96/EC requires that the equipment bearing this symbol on the product and/or its packaging must not be disposed of with unsorted municipal waste. The symbol indicates that this product should be disposed of separately from regular household waste streams. It is your responsibility to dispose of this and other electric and electronic equipment via designated collection facilities appointed by the government or local authorities. Correct disposal and recycling will help prevent potential negative consequences to the environment and human health. For more detailed information about the disposal of your old equipment, please contact your local authorities, waste disposal service, or the shop where you purchased the product.

DECLARATION OF CONFORMITY

Hereby, Marmitek BV, declares that this TM13 is in compliance with the essential requirements and other relevant provisions of the following Directives:

Directive 2004/108/ec of the european parliament and of the council of 15 December 2004 on the approximation of the laws of the Member States relating to electromagnetic compatibility

Directive 2006/95/EC of the European Parliament and of the Council of 12 December 2006 on the harmonisation of the laws of Member States relating to electrical equipment designed for use within certain voltage limits

Directive 2002/95/EC of the European Parliament and of the Council of 27 January 2003 on the restriction of the use of certain hazardous substances in electrical and electronic equipment

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